

Firebreak Compound

<p>DESCRIPTION</p>	<p>Firebreak Compound is a single pack material that, when mixed with water, provides a fire resistant smoke stop seal able to reinstate the fire resistance of separating walls and floors when penetrated by building services. It is tested and certified to meet the exacting requirements of BS 476: Part 20: 1987 in conjunction with prEN 1366-3: 2002 guidance.</p>
<p>ADVANTAGES</p>	<ul style="list-style-type: none"> • Safe: free of fibres, silica and halogens • Up to 4 hours fire resistance (integrity and insulation). Can be used in wall and floor penetrations to accommodate a variety of penetrating services • Easy to use: can be applied by trowel or poured into position • Does not require specialist equipment. Simple mixing and application tools can be used and cleaned with water • Good surface finish • Does not shrink on setting and provides a rigid, gas-tight barrier to smoke, combustion gasses and halon gas • Quick setting • Seals are easily drilled, and refilled, for later installation of services • Non-combustible • Long service life: maintenance free once installed correctly • Flexible seal designs, both with and without permanent shuttering
<p>CHARACTERISTICS AND FEATURES</p>	<p>Firebreak Compound is a mixture of carefully selected inorganic materials and special additives that together provide fire resistance, mechanical strength and versatile workability. It is designed for use where a rigid, gas-tight seal is required around pipes, cables, trunking <i>etc.</i> passing through a fire compartment wall or floor.</p> <p>Appearance: Off-white powder</p> <p>Density: Approximately 660 Kg/m³ as untapped, free-flowing powder. Approximately 860 Kg/m³ one month after application</p> <p>Expansion: Less than 0.15% on setting</p> <p>Thermal conductivity: Less than 0.3 W.m⁻¹.K⁻¹</p> <p>Chloride content: Zero</p> <p>Compatibility with services: Excellent adhesion to concrete, metals and cables</p> <p>Storage: Firebreak Compound must be stored in dry conditions clear of the ground. Shelf life of an unopened bag is six months from date of manufacture.</p> <p>Packaging: 20 Kg bags</p> <p>Health & Safety: See separate Material Safety Data Sheet</p>

Seal Types: Three alternate seal designs are available for use

Type 'A'	Floor Seal: 50mm mineral wool batt (140 Kg/m ³) overlaid with 50mm min. Firebreak Compound
Type 'B'	Wall Seal: 50mm mineral wool batt (140 Kg/m ³) faced both sides with 25mm min. Firebreak Compound
Type 'C'	Floor & Wall Seal: 50mm min. Firebreak Compound

Integrity only: Floor seals

Seal Type	Minimum Firebreak Compound Thickness (mm) For Fire Resistance Period (minutes.)		
	up to 120	180	240
Type 'A'	50	50	50
Type 'C'	50	75	100

Integrity only: Wall seals

Seal Type	Minimum Firebreak Compound Thickness (mm) For Fire Resistance Period (minutes.)		
	up to 120	180	240
Type 'B'	25	25	50
Type 'C'	50	75	100

FIRE SEAL DESIGN

Integrity & Insulation: Floor Seals

Type 'A'	50mm Mineral Wool Batt (140 Kg/m ³) Overlaid with Firebreak Compound					
Service	Minimum Firebreak Compound Thickness (mm) For Fire Resistance Period (minutes.)					
	30	60	90	120	180	240
Blank Seal	50	50	50	50	50	50
Steel Cable Tray/Ladder	50	50	50	60	90	120
Small Cables [<10mm dia.]	50	75	95	115	150	-
Large Cables [>10mm dia.]	50	80	100	115	150	-
Steel Cable Duct + Cables	50	50	50	110	130	-
Steel Pipe	50	50	50	50	50	50
Copper Pipe	80	135	200	250	-	-

Type 'C'	Firebreak Compound					
Service	Minimum Firebreak Compound Thickness (mm) For Fire Resistance Period (minutes.)					
	30	60	90	120	180	240
Blank Seal	50	50	50	50	100	100
Steel Cable Tray/Ladder	100	100	100	120	180	240
Small Cables [<10mm dia.]	100	150	190	230	300	-
Large Cables [>10mm dia.]	100	160	200	230	300	-
Steel Cable Duct + Cables	100	100	100	220	260	300
Steel Pipe	100	100	100	100	100	100
Copper Pipe	160	270	400	500	-	-

Integrity & Insulation: Wall Seals

Type 'B'	50mm Mineral Wool Batt (140 Kg/m ³) Faced Both Sides with Firebreak Compound					
Service	Minimum Firebreak Compound Thickness (mm) For Fire Resistance Period (minutes.)					
	30	60	90	120	180	240
Blank Seal	25	25	25	25	25	50
Steel Cable Tray/Ladder	25	25	25	30	45	60
Small Cables [<10mm dia.]	25	25	25	25	60	100
Large Cables [>10mm dia.]	25	35	55	60	85	110
Steel Cable Duct + Cables	25	25	25	35	50	75
Steel Pipe	25	30	40	50	65	85
Copper Pipe	25	40	60	75	-	-

Type 'C'	Firebreak Compound					
Service	Minimum Firebreak Compound Thickness (mm) For Fire Resistance Period (minutes.)					
	30	60	90	120	180	240
Blank Seal	50	50	50	50	100	100
Steel Cable Tray/Ladder	100	100	100	110	140	170
Small Cables [<10mm dia.]	100	100	100	100	170	250
Large Cables [>10mm dia.]	100	120	160	180	220	270
Steel Cable Duct + Cables	100	100	100	120	150	200
Steel Pipe	100	110	130	150	180	220
Copper Pipe	100	130	170	200	-	-

Maximum Opening Sizes:

Type 'A' and **Type 'C'** Floor Seals for up to **240 minutes** Fire resistance may be **any length** by the following **maximum widths**:

Firebreak Compound Thickness (mm)	Maximum Opening Width (mm) x Any Length
50	660
55	715
60	770
65	820
70	875
75	930
80	985
85	1040
90	1090
95	1145
100 or >100	1200

N.B. **Firebreak Compound** is not designed to be structurally loadbearing. Hence, in areas where floor seals may be subject to pedestrian or other traffic they should be suitably protected.

Type 'B' and **Type 'C'** Floor Seals for up to **120 minutes** Fire resistance may be **any length** by the following **maximum heights**:

Firebreak Compound Thickness (mm)	Maximum Opening Width (mm) x Any Height
50	660
55	715
60	770
65	820
70	875
75	930
80	985
85	1040
90	1090
95	1145
100 or >100	1200

Type 'B' and **Type 'C'** Floor Seals for **180 minutes** Fire resistance may be **any length** by the following **maximum heights**:

FIRE SEAL DESIGN

Firebreak Compound Thickness (mm)	Maximum Opening Width (mm) x Any Height
50	600
55	660
60	720
65	780
70	840
75	900
80	960
85	1020
90	1080
95	1140
100 or >100	1200

Type 'B' and Type 'C' Floor Seals for 240 minutes Fire Resistance may be Any Length by 1000mm

Preparation

Ensure contact surfaces within the opening and services are clean, and free of grease and loose material. Also, that mineral wool batts (where used) and clean water for mixing are available.

Mineral Wool Damming Boards

Where used, these should be cut to size and friction fitted around the services within the opening to form a tight seal. Loose mineral wool may be used to infill small gaps. In wall openings the batt is normally located central to the depth of the wall. In floor openings it is usually located such that the finished seal is flush with the surface of the floor. For larger floor openings additional temporary supports may be required until the **Firebreak Compound** has set.

Mixing

Gradually add **Firebreak Compound** to clean water in a container while stirring manually or mechanically. Continue mixing until a smooth, lump-free consistency is obtained. Recommended mix ratios are as follows:

Firebreak Compound	Water (by volume)
Pouring into floor openings	2½ : 1
Stiff, but trowellable, into wall openings	3 : 1

DIRECTIONS FOR USE

The pot life and setting time depends on the size of mix; the amount of water used and ambient/water temperatures. Typical set times are between 45 and 90 minutes.

Approximately two 20 Kg bags of **Firebreak Compound** are required to fill a clear space of 1 m² area to a depth of 50 mm. Application tools and mixing equipment should be cleaned with clean water immediately after use.

Wall Seals

Porous contact surfaces are best wetted to ensure a good bond with the **Firebreak Compound**. For small holes, shuttering may not be required and a stiff mix can be trowelled directly into the opening ensuring any gaps between services are fully filled.

For large openings, where a mineral wool batt damming board is used, a stiff mix can again be trowelled directly into the opening building up from supporting surfaces to achieve the required thickness for the fire protection period specified. A depth probe or marked nail may be used to check the depth of the **Firebreak Compound**. Where an insulated seal is specified, the seal depth may be increased locally for a minimum distance of 25mm around individual high conductance services (i.e. copper pipe).

Floors

The **Firebreak Compound** should be mixed to a pouring consistency and worked around and between the services to ensure a tight seal. Once the required thickness is achieved the surface can be trowelled to a smooth finish. Any combustible or temporary shuttering is best removed once the **Firebreak Compound** has set.

Since the product is applied under circumstances beyond our control, Phoenix Fire Protection Europe Ltd can accept no direct or consequential liability whether in contract or in tort, for the interpretations of such recommendations and reserves the right to modify the recommendations as necessary.



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